Gender Differences in the Perceived Impact that Athlete Leaders have on Team Member Emotional States.

Abstract

Emotional contagion has been recognized as a variable influencing individual behaviour and team functioning. In particular, leaders within the team have been suggested to have a significant impact on their teammates through the expression of their emotions. As a result, the aim of this study was to provide greater insight into how different athlete leaders impact the emotional state of their team members, and whether gender differences existed in these relationships. Participants were 295 university student-athletes (200 male and 95 female) recruited from four universities in the UK. Data were collected in a two-step process. First, a voting/rating procedure was conducted within team to identify dominant task, motivational, social and external leaders. Then, participants completed the emotional contagion subscale of the Measure of Empathetic Tendency to rate the impact different athlete leaders had upon their emotional state. A MANOVA was conducted to explore gender differences in reported emotional susceptibility by leadership role. Subsequent ANOVAs highlighted significant differences between leadership role scores for female participants only. The results suggest that female athletes are more susceptible to emotional influence than male athletes. Furthermore, female athletes experienced a greater variation in the perceived emotional influence of different leadership roles in the team.

Keywords: emotional contagion, gender, athlete leadership, leadership roles, peer leadership

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Introduction

Emotional contagion, or the spread of emotions from one individual to another (Hatfield, Cacioppo, & Rapson, 1994), has been increasingly highlighted as a variable influencing individual behaviour and team functioning (Vijayalakshmi & Bhattachararyya, 2012). The transfer of positive emotions among adults in groups is an important phenomenon as it has been associated with beneficial group outcomes such as increased co-operation and decreased conflict (Barsade, 2002).

Leaders play a significant role in influencing their followers to achieve positive group outcomes (Mallett & Lara-Bercial, 2016). However, there is surprisingly little literature examining a leader's ability to influence the spread of emotions in groups, especially given the emotional links that form between leaders and their followers (For a review see, Clarkson, Wagstaff, Arthur, & Thelwell, 2019).

Furthermore, very few studies to date have directly investigated emotional contagion in sport. Van Kleef, Cheshin, Koning, and Wolf (2019) conducted two field studies in competitive sports teams and reported that coaches' expressions of happiness and anger predicted players' experiences of both emotions. With respect to the emotional contagion amongst athletes, Totterdell (2000) reported that individuals' moods were transferred between teammates during a cricket match, with greater mood convergence in those with a high susceptibility to emotional contagion. In this study Totterdell collected mood and performance data from the players of two cricket teams during one match. The results highlighted a link between the happy mood of the team and subjective individual performance. Also, Moll, Jordet and

Pepping (2010), in a study of male soccer players' post-penalty emotional expressions, further established that this emotional transfer (emotional contagion) does not only occur between teammates but can also occur between opponents. Building upon these few studies, the current study sought to expand the literature examining emotional contagion in sport by drawing attention to emotional contagion between athlete leaders and their followers.

Though the concept of emotional contagion is an area of increasing interest in organisational settings (Barsade, Coutifaris, & Pillemer, 2018), the limited research in this area so far in the context of sport has examined the effect of a leader's ability to influence the spread of emotions from a charismatic and transformational theoretical framework, and crucially has only explored the formal (i.e., the coach) leader rather than leaders within the sports team (e.g., Johnson, 2008; Visser, van Knippenberg, van Kleef, & Wisse, 2013). Attention has also yet to be paid to the underlying affective mechanisms of how an athlete's leadership role (e.g. captain) influences group outcomes in teams. This mechanism is particularly important in sport (e.g., rugby, cricket) where the captain is a key decision maker on the pitch during the game, and seeks to influence a group of team members to achieve a common goal (Cotterill & Cheetham, 2017; Loughead, Hardy, & Eys, 2006). There is also a general finding within the broader emotional contagion literature that gender differences exist in the degree to which individuals' emotional states are influenced by others (Doherty, Orimoto, Singelis, Hatfield, & Hebb, 1995); though this has not been explored within the context of sport. As a result, this study also explored potential gender differences in perceived emotional contagency as well.

In summary, this study represents an investigation of the emotional processes that in part explain the influence of athlete leadership on group outcomes in sports

teams. This study further builds upon research seeking to explore the role of athlete leaders and their impact on the team, and by drawing on these insights investigating how to maximise the leaders' influence (Cotterill & Cheetham, 2017; Cotterill & Fransen, 2016). As a result, the aims of the current study were to: (1) Explore differences in perceived emotional contagion between different leadership roles; (2) to explore potential gender differences in susceptibility to emotional contagion; and (3) to investigate whether different leadership roles had greater emotional influence within gender.

Materials and Method

Ethical approval for the study was gained via the University Ethics Committee at the Institution where the first two authors worked at the time of the study. All of the participants opted to take part in the study by giving their informed consent.

Participants

Participants were recruited from university sports teams across four institutions located in the South of England. In total, 295 university athletes participated in the study (i.e. 200 male and 95 female athletes). The male participants were recruited from three sports: rugby union (n=96), football (n=76), and hockey (n=28). The female participants were recruited from rugby union (n=46), netball (n=35), and hockey (n=14). For further details see table 1.

Table 1. Here!

Measures

Identification of the athlete leaders. The first step was to identify which athletes were perceived by their teammates as best leaders in each of the four key leadership roles that athletes can occupy. According to Fransen et al. (2014) these

leadership roles include the roles of task, motivational, social, and external leader (for further details see table 2). To identify the best leaders, we sought the views of the individual team members, an approach advocated by Fransen et al. (2015) in their leadership study that adopted a social network analysis approach.

Table 2 about here!

To identify the individuals within each specific team that team members felt best fulfilled each of the four specific leadership roles within their team. This was achieved following guidance outlined by Fransen et al. (2015) in the first step of their leadership study. To achieve this end, each player on a team rated each of their teammates with respect to their leadership quality for each specific leadership role. For each leadership role participants were presented with a clear description of the role at hand (as presented in Table 2.), then were asked to rate each teammate with respect to their leadership quality for this role on a 10-point Likert scale, ranging from 0 (*very poor leader*) to 4 (*very good leader*). The names of all of the members of the team were added to the questionnaire prior to participant completion. The likert scale scores by the team members were added together to give a final total for each member of the team rating the leadership ability across the four leadership roles. The individual in the team with the highest score for each role was classified as the designated role leader. Participants did not though rate themselves as leaders.

Perceived Emotional Contagion. The second step in this study then required each team member to complete the 7-item emotional contagion subscale of the Measure of Empathetic Tendency (MET: Mehrabian & Epstein, 1972) for each of the four assigned athlete leaders in their team. This measure was adopted as some concerns exist regarding the use of the Emotional Contagency Scale (ECS) in terms of its applicability to sport (i.e., the inappropriate nature of some items), and some

concerns over factor structure (e.g., Lundqvist, 2006). The MET scale was chosen as the nature of the items were appropriate for substituting the name of each athlete leader within each item. A sample item is "I become nervous if the {leader} becomes nervous". Responses are measured using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The higher the emotional contagion scale score, the more susceptible to emotional contagion the individual is said to be to the athlete leader in question. The names of the specific individuals for each leadership role were included at the start of the second set of questionnaires given to participants. Participants within the team scored the questionnaire separately for each of the four individual athlete leaders. This second set of questionnaires was completed during a second data collection point.

Data Analysis

Data analysis took place in two parts. First, a multivariate analysis of variance (MANOVA) was performed to explore gender differences in emotional susceptibility for four separate types of leader: task, motivation, social and external. A bonferroni adjustment was conducted dividing the original alpha level (0.05) by the number of dependent variables (4) to produce a revised alpha level of 0.0125.

The second step in the data analysis process explored the within-gender differences in emotional susceptibility across the four different leadership roles. To achieve this outcome a one-way between groups analysis of variance (ANOVA) was conducted for motivation, task, social and external leadership scores for each gender type.

Results

The results section is split into three specific parts. The first focuses on the impact of athlete leaders on the emotional state of team-members. The second

158 focuses on gender differences in the impact of athlete leader type on athlete
159 emotional state. The third focuses on within gender differences between athlete
160 leadership role.

161 **Impact of athlete leaders on the emotional state of team-members**

162 Table 3 shows that the mean values for emotional contagion within the athlete
163 population as a whole are relatively high for all four athlete leadership roles (task,
164 motivational, external and social). These scores were recorded by participants when
165 considering the impact that the individual role leaders in each team had in relation to
166 emotional contagion. The mean scores for all four leadership roles are between 3.0 –
167 3.2 on a scale of 0-4; which suggests that the athlete leaders within the sports teams
168 in this study do exert a perceived impact upon the emotional state of the rest of the
169 team-members.

170 **Table 3. About here!**

171 **Gender differences in susceptibility to emotional influence**

172 Preliminary assumption testing was conducted to check for normality,
173 linearity, univariate and multivariate outliers, homogeneity of variance-covariance
174 matrices, and multicollinearity, with no serious violations noted. There was a
175 statistically significant difference between males and females on the combined
176 dependent variables ($F(3,295) = 11.07$, $p < .05$; Wilks' Lambda = .87; $\eta_p^2 = .13$).
177 More specifically, data revealed that female athletes are more susceptible to
178 emotional influence than their male colleagues are. Mean values for both male and
179 female participants across the four leadership roles are presented in Table 4.

180 When the results for the dependent variables were considered separately,
181 using a bonferroni adjusted alpha level of .0125, statistically significant differences
182 were found between male and female scores for motivational leaders ($F(1,293) =$

9.33, p = 0.002; η_p^2= .03); social leaders (F(1,293) = 6.30, p = 0.01; η_p^2 = .02); and external leaders (F(1,293) = 6.73, p = 0.01; η_p^2=.02). There was no statistically significant difference found for task leaders.

Table 4 about here

Perceived differences in the degree of emotional influence between leadership roles.

The one-way ANOVA for male participants found no significant effect between leader type (Wilks'Lambda = 1.0 F(1,200) = .28, p = .84, multivariate η_p^2 = <.01). This suggests that that all leadership roles have a similar influence on male team-members.

There were significant differences reported following the one-way ANOVA for female participants [Wilks'Lambda=.735, F(1-95)=11.04, p=<0.05, multivariate η_p^2=.265]. This finding suggests that there are differences in the impact that different leadership roles can have upon the emotional state of female team-members.

Discussion

The aims of the current study were to: (1) Explore differences in perceived emotional contagion between different leadership roles; (2) to explore potential gender differences in susceptibility to emotional contagion; and (3) to investigate whether different leadership roles had greater emotional influence within gender. Athletes in the current study reported being susceptible to the emotions of their identified athlete leaders, showcasing the important role that athlete leaders have on the emotions of their teammates.

The results in the current study also highlighted significant differences between male and female participants in the perceived emotional contagion for social, motivation, and external leaders. These results suggest that for these three

types of athlete leaders, female athletes appeared to have a higher susceptibility to emotional contagion than their male counterparts did. This finding is similar to the few studies that have previously explored gender differences in emotional expression and transfer. There is some existing research that suggests that females can be influenced more emotionally by the behaviour of others (e.g., Sonnby-Borgstrom & Svensson, 2008). Indeed, gender differences have been highlighted more broadly in relation to emotional contagion, with women reported to be more susceptible to emotional contagion than men (Doherty et al., 1995). This finding is supported by recent experimental and facial reactivity research in psychology, where gender differences in the expression of emotions during social interactions (*expresser* side) have highlighted a female susceptibility to emotional expressions (Wiggert, Wihelm, Derntl, & Blechert, 2015). It is also interesting to note that women also rate themselves as emotionally more expressive than males (Simon & Narth, 2004).

The current study is, to our knowledge, the first to explore how athlete leaders affect the emotional state of team-members, and differences that exist between different leadership roles. The study is also the first to analyze these gender differences in the context of sport, and the first time that the ability of the leader to impact upon the emotions of their followers has been explored in a sporting context. One of the reasons articulated more broadly within the psychology literature regarding this increased contagency for females relates to greater emotional awareness, often referred to as emotional intelligence (Sánchez-Núñez et al., 2008); with women reported to pay more attention to the emotions of others, which in turn increased their emotional susceptibility (Hatfield, Bensman, Thornton, & Rapson, 2014). The type of emotional contagion that takes place could also be crucial. It has been suggested that increased susceptibility to negative emotions can have a

damaging impact upon individual team members and the team collectively. However, increased susceptibility to positive emotions has been reported to have a positive impact upon cooperativeness, conflict, and perceptions of task performance (Barsade, 2002). Positive emotion contagion has also been linked to enhanced team effectiveness (Vijayalakshmi & Bhattacharyya, 2012). This suggests that future research within the domain of sport should seek to explore emotional contagion in greater detail and seek to explore the impact of different types (e.g., positive and negative) of emotions can have regarding emotional influence.

It is also important to note that the current study highlights a link between the susceptibility of individual members to the emotions of the individuals in specific leadership roles. This link might reflect a tendency for female team-members to be influenced more by their leaders compared to male athletes. It could however, also be true that athlete leaders in female sports teams are more emotionally expressive (Tamminen & Bennett, 2017) and better transmitters of emotion, so it is the sender rather than the receiver of the emotion-inducing messages that is the real point of difference. This aspect of the leader-follower relationship was not explored in the current study. Future research though could seek to explore both athlete emotional susceptibility and leader emotional influence ability (Cheng, Yen & Chen, 2012). Especially as there is evidence to suggest that the greater the congruence between a sender's and receiver's affective states, the greater the contagion effect (Clarkson et al., 2019).

One limitation of the current study was the imbalance in the number of male versus female participants. It proved to be more difficult to recruit female university sports teams compared with male teams, but these differences could have impacted upon the observed results and outcomes. It could also be argued that this fact also

shows the strength of the results, that significant differences were found despite more male participants than female. Also, the current study focused on emotional contagion, but this was only at a global emotional level. It would be interesting to explore differences in positive and negative emotional contagion, but at present there is not a validated tool appropriate for the sporting context that differentiates between different types of emotions.

Future research should look to explore the impact of athlete leader emotions at different levels of performance and professional sport status to see if there are differences in the perceived impact of different types of athlete leader on team member emotional state. As the participants in the current study were university students, where there is often a higher turnover of players, it would be worth exploring non student-athlete teams as well. There is also a need to explore whether different athlete leadership roles have the same impact when explored within different cultural contexts, especially as cross-cultural differences in contagion have been highlighted in organizational contexts (Hatfield, Rapson, & Narine, 2018). It would also be interesting to see if gender differences in the impact of athlete leaders on emotional state are repeated in different samples at different levels. Another focus of future research could be to explore objective measures of emotionality and emotional contagion in team members rather than perceived impacts. Especially as there is evidence that suggests that gender stereotypes can bias participant self-reports (Brody & Hall, 2008). Finally, it is important to note that the study draws together emotions and leadership themes as recently advocated by authors including Humphreys, Birch, and Adams (2016).

Conclusion

The current study builds on a range of previous studies that have highlighted the impacts (both positive and negative) that leaders in teams can have upon teammates. This study though highlighted crucial gender differences in the impact that different types of leaders can have. These findings reinforce the importance of getting the right people in the right leadership positions in the team, and also to ensure that there is the involvement of team members in the selection of relevant team leaders. Finally, the results from this study suggest that emotional contagion is one of the underlying affective mechanisms through which athlete leaders influence the team and team outcomes.

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